Heuristic Evaluation

South Dakota Game, Fish and Parks Website

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ITC 298 UX Research Methods
Website Under Evaluation: <http://gfp.sd.gov/>
2016-05-09

Objectives

Our team performed a heuristic evaluation on the South Dakota Game, Fish and Parks (SD GFP) website, with the goal of discovering usability problems within the site. Heuristic evaluation is an inexpensive, quick, and easy way to find usability problems. Using a set of established criteria developed by Jakob Nielsen and Robert Molich, each evaluator carried out a set of tasks that were decided upon by our team.

Through this evaluation, we intended to locate and prioritize any problems with the SD GFP website. This will allow us to make informed recommendations on how to optimize the site and improve user experience.

Procedures and Materials

Our team reviewed the South Dakota Game, Fish, & Parks website <http://gfp.sd.gov/> for compliance to the Nielsen Norman Group's Ten Heuristic Principles. Using these principles, as well as the Nielsen Norman Group's Severity Scale for Usability Problems, we assessed the need to change any problems that were found.

Heuristic Principles

1. **Visibility of system status:** The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.
2. **Match between system and the real world:** The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.
3. **User control and freedom:** Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

4. **Consistency and standards:** Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

5. **Error prevention:** Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

6. **Recognition rather than recall:** Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7. **Flexibility and efficiency of use:** Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. **Aesthetic and minimalist design:** Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9. **Help users recognize, diagnose, and recover from errors:** Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10. **Help and documentation:** Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Severity Scale

When we are evaluating the website we used Nielsen's five-point rating scale for the severity of usability problems found by heuristic evaluation:

0 – **No Problem:** I don't agree that this is a usability problem at all

1 – **Cosmetic problem only:** need not be fixed unless extra time is available

2 – **Minor usability problem:** fixing this should be given low priority

3 – **Major usability problem:** important to fix, so should be given high priority

4 – **Usability catastrophe:** imperative to fix this before product can be released

Scenarios & Tasks for Evaluation

Scenario 1: An avid hunter is looking to purchase a license/permit for particular hunting season, and to find ways to mentor youth. They like to stay updated on current events, as well as laws. They aren't internet savvy - they don't want to spend more than a few clicks of the mouse on any given task.

User Task 1:
a. Find the season dates and permit costs for the black hill deer.
b. Go to online license application.

User Task 2:
a. Find information on mentoring youth hunters.
b. Go to application for big game mentored hunt.

Scenario 2: A family with children is looking for summer activities to occupy their time while visiting South Dakota. They want to find educational options, as well as fun activities for the children to participate in.

This user is familiar with looking for family friendly activities on various web spaces. They expect things to be in certain locations, and for the flow of a task to be familiar.

User Task 1:
a. Locate events calendar.
b. Find festivals occurring in the month of August.

User Task 2:
a. Find campsites near horse trails.
b. Investigate individual campsites for booking.

Findings

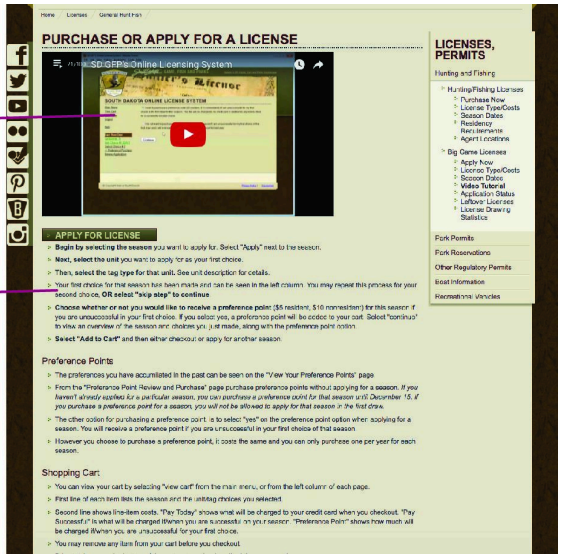
Scenario 1 - Task 1

6 Recognition rather than recall

- Instruction video is not intuitive and forces user to return to this page if they need help, even after they have logged in.

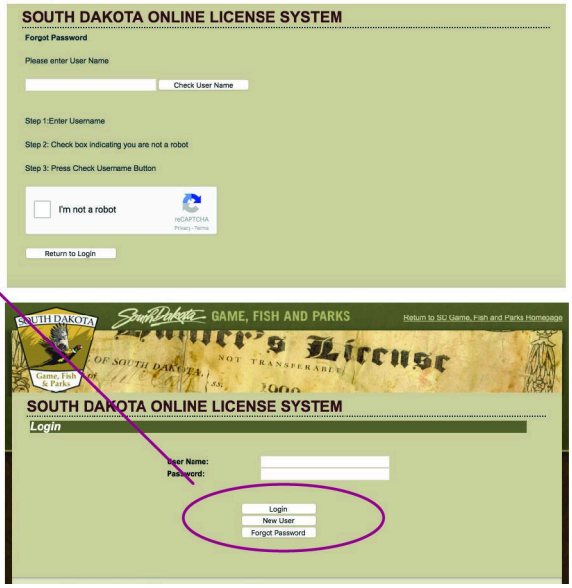
10 Help and documentation

- Documentation is wordy, poorly displayed, and not accessible from account page.



9 Help users recognize, diagnose, and recover from errors

- No option for user to recover login.

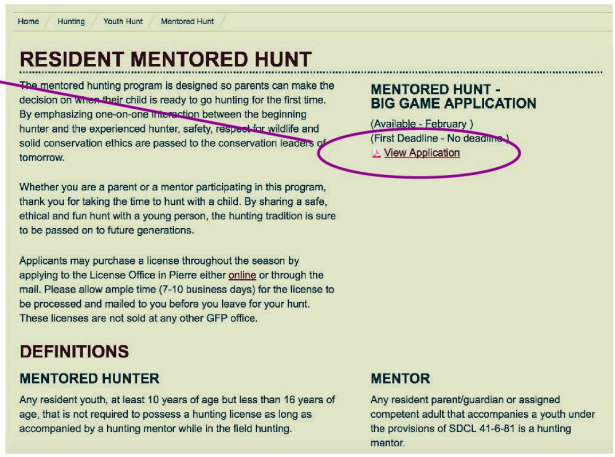


Scenario 1 - Task 1		
Heuristic Principle	**Avg Rating**	**Notes**
1. Visibility of system status	1.8	Visibility could be improved to help user understand where they are and where they are going within the site.
2. Match between system and the real world	1.3	Info does not flow in a natural and logical way. There are several different ways to explore "Hunting" section of the website, each takes user on different path, making it confusing to navigate.
3. User control and freedom	1.3	
4. Consistency and standards	1.3	No Login utility at top of page, which would allow user to access their account easily.
5. Error prevention	1.3	
6. Recognition rather than recall	2.8	Instruction video is not intuitive and forces user to return to this page if they need help, even after they have logged in. See visual in Findings section.
7. Flexibility and efficiency of use	1.8	Experienced users should be able to log in to their account with one click.
8. Aesthetic and minimalist design	2	Cluttered interface, layout should be more intuitive, information architecture is disorganized.
9. Help users recognize, diagnose, and recover from errors	1.8	No option for user to recover login. See visual in Findings section.
10. Help and documentation	2.3	Documentation is wordy, poorly displayed, and not accessible from account page. Instructional video on "How to Apply/Purchase License" is confusing and difficult for user to refer back to when they need help. See visual in Findings section.

Scenario 1 - Task 2

4 Consistency and standards

- Today's web users expect to use an online application process, rather than paper form. However only a paper form is linked from this page.



Home / Hunting / Youth Hunt / Mentored Hunt

RESIDENT MENTORED HUNT

The mentored hunting program is designed so parents can make the decision on when their child is ready to go hunting for the first time. By emphasizing one-on-one interaction between the beginning hunter and the experienced hunter, safety, respect for wildlife and solid conservation ethics are passed to the conservation leaders of tomorrow.

Whether you are a parent or a mentor participating in this program, thank you for taking the time to hunt with a child. By sharing a safe, ethical and fun hunt with a young person, the hunting tradition is sure to be passed on to future generations.

Applicants may purchase a license throughout the season by applying to the License Office in Pierre either online or through the mail. Please allow ample time (7-10 business days) for the license to be processed and mailed to you before you leave for your hunt. These licenses are not sold at any other GFP office.

MENTORED HUNT - BIG GAME APPLICATION

(Available - February)
(First Deadline - No deadline)
View Application

DEFINITIONS

MENTORED HUNTER

Any resident youth, at least 10 years of age but less than 16 years of age, that is not required to possess a hunting license as long as accompanied by a hunting mentor while in the field hunting.

MENTOR

Any resident parent/guardian or assigned competent adult that accompanies a youth under the provisions of SDCL 41-6-81 is a hunting mentor.

6 Recognition rather than recall &

7 Flexibility and efficiency of use

- Users are expected to remember the information from paper application, then go back and find online application.
- The process users have to go through to apply is inefficient, regardless of whether they use the PDF application form or go back and look for the online application.

APPLY ONLINE: gfp.sd.gov

Applying online is as easy as it has ever been for any type of big game hunting license in South Dakota. Simply visit gfp.sd.gov to apply online. You cannot miss the link from the homepage that says "Purchase a Hunting License." From there, the system walks you through step by step. If you do not already have an account, you will be required to create one. You will begin by selecting a season to apply for and your first choice hunting unit. Please note that you are required to provide a credit or debit card number to finish the transaction. Upon completion and submission of your application, you are then placed directly into the drawing for the unit you selected. Preference points are automatically included if you opted to purchase one or if you had any from previous years. To learn more about applying online, a tutorial video is available and will walk you through the process step by step. So if you have 10 minutes, please take the time to watch this video online at gfp.sd.gov.

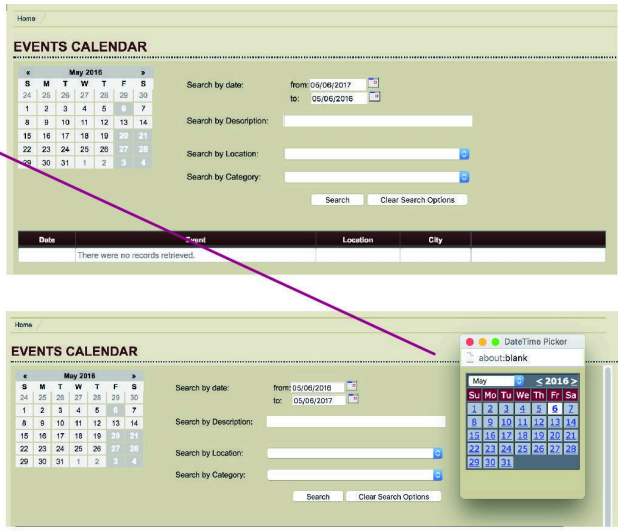
You may find the most convenient method is to apply using the online system offered by GFP at its website: gfp.sd.gov. Click on the link that invites you to apply for limited license seasons and follow the instructions. Your application will be submitted directly into the license lottery system without mail time or further handling. If errors occur, you will be prompted to correct them before proceeding.

Scenario 1 - Task 2		
Heuristic Principle	**Avg Rating**	**Notes**
1. Visibility of system status	1	
2. Match between system and the real world	1	
3. User control and freedom	2.3	Hyperlinks would be helpful in PDF application, to take user to online application page.
4. Consistency and standards	3.3	Today's web users expect to use an online application process, rather than paper form. However only a paper form is linked from this page. See visual in Findings section.
5. Error prevention	2.3	No error prevention to speak of, as linked application is in PDF format.
6. Recognition rather than recall	2.6	Users are expected to remember the information from paper application, then go back and find online application. See visual in Findings section.
7. Flexibility and efficiency of use	2.3	The process that users have to go through to apply is inefficient, regardless of whether they use the PDF application form or go back and look for the online application. See visual in Findings section.
8. Aesthetic and minimalist design	2.3	Cluttered interface, information architecture is disorganized.
9. Help users recognize, diagnose, and recover from errors	2.3	No help available to return from PDF form to online application page.
10. Help and documentation	3.3	Overuse of documents which do not focus on the user's task. E.g. a PDF form that encourages people to reserve online instead.

Scenario 2 - Task 1

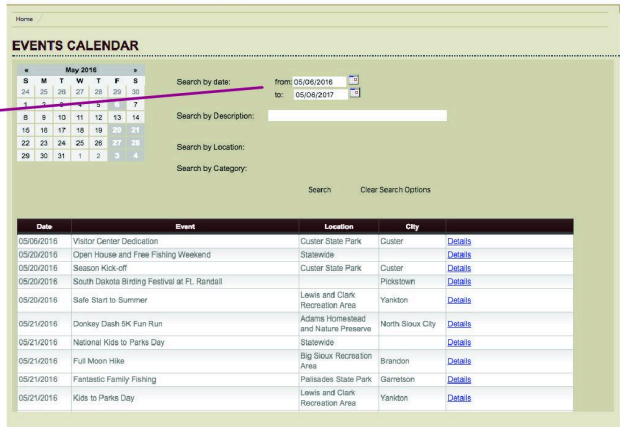
1 Visibility of system status

- Date select tool in calendar is poorly designed, doesn't inform user whether they are choosing start date or end date. Very easy to make a mistake without realizing.



9 Help users recognize, diagnose, and recover from errors

- Should provide error if date range is entered incorrectly.

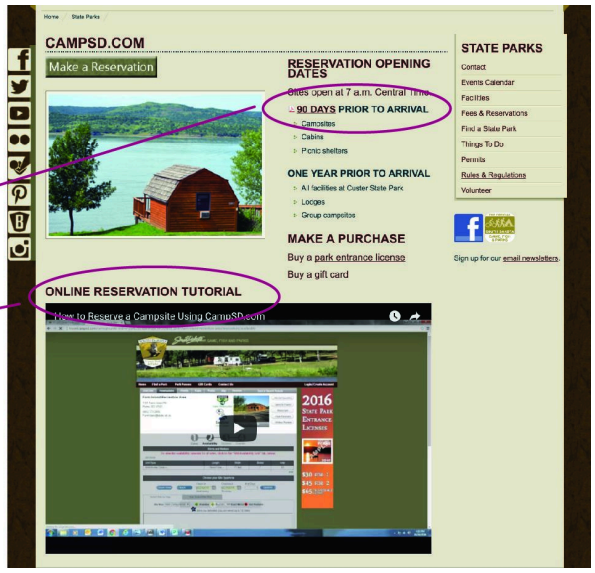


Scenario 2 - Task 1		
Heuristic Principle	**Avg Rating**	**Notes**
1. Visibility of system status	2.3	Date select tool in calendar is poorly designed, doesn't inform user whether they are choosing start date or end date. Very easy to make a mistake without realizing. See visual in Findings section.
2. Match between system and the real world	1.5	Cannot search for festivals by searching for "festival" in description search box, only be category.
3. User control and freedom	1.5	"Back to Events List" button on event page resets end date to match start date, without notice or warning.
4. Consistency and standards	3	Searching by "Description" vs "Category" to sort brings up entirely different results, which would confuse user.
5. Error prevention	2.8	Calendar does not support standard exception handling. Error "date invalid" pops up when date hasn't been changed by user.
6. Recognition rather than recall	1.3	
7. Flexibility and efficiency of use	2.3	Would be easier to read if displayed in a traditional calendar format.
8. Aesthetic and minimalist design	2.3	Cluttered interface, information architecture is disorganized and difficult to navigate.
9. Help users recognize, diagnose, and recover from errors	2.8	Should provide error if date range is entered incorrectly. See visual in Findings section.
10. Help and documentation	1	

Scenario 2 - Task 2

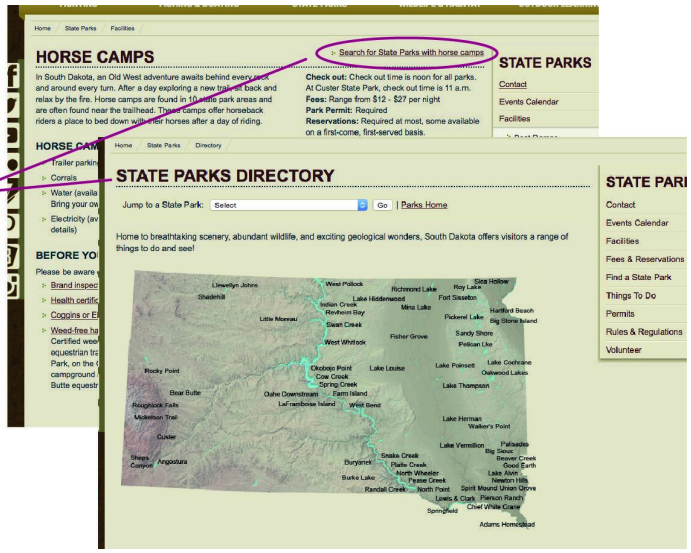
10 Help and Documentation

- Reserve a Campsite page is cumbersome and confusing, needs better documentation.
- The 90 Day booking calendar (PDF informing how early they can book their campsite) should be a widget or similar that is incorporated into the booking process.
- Instructional video on "How to Book" is confusing and difficult for user to refer back to when they need help.



2 Match between system and real world

- Site information does not follow a natural logical order.
- Search for "State parks with horse camps" link goes to a general state parks directory leading the user further away from where the link said it would go.

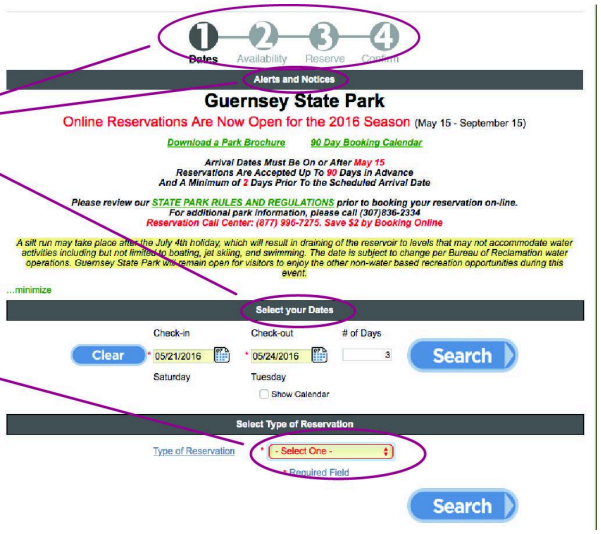


4 Consistency and standards

- 4-step process should correspond exactly with steps as they appear on the page in grey bar areas. Instead, we have Alerts and Notices at top where Dates should be.

3 User control and freedom

- There are no selections to choose from in this drop down menu. Search button does not let user past this point. This is bad.



Scenario 2 - Task 2		
Heuristic Principle	**Avg Rating**	**Notes**
1. Visibility of system status	1.3	"Breadcrumb" links don't work from individual campsite page - clicking on them takes user back to a different part of the site
2. Match between system and the real world	1.3	Site information does not follow a natural logical order. E.g. the search for State parks with horse camps link goes to a general state parks directory. See visual in Findings section.
3. User control and freedom	2.3	In attempting to select a "type of reservation" there is only one choice and yet it is required in order to complete the task.
4. Consistency and standards	2.6	Confusing labels - "Reserve a Campsite" button destination page shows the link button "Make a Reservation" and a link to "Buy a Park Entrance License" which is confusing for users. Users will want to know, do they need to make a reservation and buy a license? Do they need only one? Or are these the same thing?
5. Error prevention	1	
6. Recognition rather than recall	2	User must remember which campsites are reservable and which aren't - no distinction until they are on the individual page.
7. Flexibility and efficiency of use	2	
8. Aesthetic and minimalist design	2.3	Cluttered interface, information architecture is poorly organized and confusing.
9. Help users recognize, diagnose, and recover from errors	2	User cannot return from campsite view, they must use the browser back button or return to homepage and start over.
10. Help and documentation	2.6	Reserve a Campsite page is cumbersome and confusing, needs better documentation. Instructional video on "How to Book" is confusing and difficult for user to refer back to when they need help. The 90 Day booking calendar (PDF informing how early they can book their campsite) should be a widget or similar that is incorporated into the booking process. See visual in Findings section.

Further Resources

Nielsen Norman Group's Ten Heuristic Principles
www.nngroup.com/articles/ten-usability-heuristics/

Norman Group's Severity Scale for Usability Problems
www.nngroup.com/articles/how-to-rate-the-severity-of-usability-problems/